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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/640,582

08/17/2000

Arnd Baumann

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12/18/2001

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EXAMINER

BASI, NIRMAL SINGH

ART UNIT

PAPER NUMBER

1646

DATE MAILED: 12/18/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/640,582

Applicant(s)

Juelich et al

Examiner

Nirmal S. Basi

Art Unit

1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Feb 14, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claims 1-46 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 20) ☐ Other: \_\_\_\_\_

Art Unit: 1646

### DETAILED ACTION

1. **Please Note:** In an effort to enhance communication with our customers and reduce processing time, Group 1640 is running a Fax Response Pilot for Written Restriction Requirements. A dedicated Fax machine is in place to receive your responses. The Fax number is 703-305-3704. A Fax cover sheet is attached to this Office Action for your convenience. We encourage your participation in this Pilot program. If you have any questions or suggestions please contact Paula Hutzell, Supervisory Patent Examiner at Paula.Hutzell@uspto.gov or 703-308-4310. Thank you in advance for allowing us to enhance our customer service. Please limit the use of this dedicated Fax number to responses to Written Restrictions.

2. ***Election/Restriction***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

1. Claims 1, 19, 20 and 25-29, drawn to isolated polypeptide encoded by the polynucleotide of SEQ ID NO:1, classified in class 530, subclass 350.
2. Claims 1, 19, 21 and 25-29, drawn to isolated polypeptide encoded by the polynucleotide of SEQ ID NO:2, classified in class 530, subclass 350.
3. Claims 1, 19, 22 and 25-29, drawn to isolated polypeptide encoded by the polynucleotide of SEQ ID NO:3, classified in class 530, subclass 350.
4. Claims 1, 19, 22 and 25-29, drawn to isolated polypeptide encoded by the polynucleotide of SEQ ID NO:12, classified in class 530, subclass 350.

Art Unit: 1646

5. Claims 1, 19, 23 and 25-29, drawn to isolated polypeptide encoded by the polynucleotide of SEQ ID NO:4, classified in class 530, subclass 350.
6. Claims 1, 19, 24 and 27-29, drawn to isolated polypeptide encoded by the polynucleotide of SEQ ID NO:5, classified in class 530, subclass 350.
- 5 7. Claims 1, 2, 3, 12, 14 and 15-18, drawn to the polynucleotide comprising SEQ ID NO:1 or variants and fragments thereof, vectors encoding, cells containing the afore mentioned expression vectors, classified in class 536, subclass 23.1, for example .
8. Claims 1, 4, 5, 12, 14 and 15-18, drawn to the polynucleotide comprising SEQ ID  
10 NO:2 or variants and fragments thereof, vectors encoding, cells containing the afore mentioned expression vectors, classified in class 536, subclass 23.1, for example .
9. Claims 1, 2, 6, 7, 12, 14 and 15-18, drawn to the polynucleotide comprising SEQ  
15 ID NO:3 or variants and fragments thereof, vectors encoding, cells containing the afore mentioned expression vectors, classified in class 536, subclass 23.1, for example .
10. Claims 1, 2, 6, 7, 12, 14 and 15-18, drawn to the polynucleotide comprising SEQ  
20 ID NO:12 or variants and fragments thereof, vectors encoding, cells containing the afore mentioned expression vectors, classified in class 536, subclass 23.1, for example .

Art Unit: 1646

11. Claims 1, 8, 9, 12, 14 and 15-18, drawn to the polynucleotide comprising SEQ ID NO:4 or variants and fragments thereof, vectors encoding, cells containing the afore mentioned expression vectors, classified in class 536, subclass 23.1, for example .

5 12. Claims 1, 10, 11, 12, 14 and 15-18, drawn to the polynucleotide comprising SEQ ID NO:5 or variants and fragments thereof, vectors encoding, cells containing the afore mentioned expression vectors, classified in class 536, subclass 23.1, for example .

10 13. Claims 30, drawn to antibody that binds to the polypeptide of claim 19, classified in class 530, subclass 387.9.

14. Claims 31-33, drawn to method of screening a substances for the ability to influence the activity of an  $I_h$  ion channel polypeptide, classified in class 435, subclass 7.1 for example.

15 15. Claims 34-36, drawn to method of screening a substances for the ability to influence the activity of an  $I_h$  ion channel comprising contacting nucleic acid with a detectably labeled nucleic acid, classified in class 435, subclass 6 for example.

16. Claims 37-38, drawn to method of treating a mammal for a cardiovascular disorder comprising administering vector comprising nucleic acid, classified in class 514, subclass 44, for example.

Art Unit: 1646

17. Claims 39-40, drawn to method of treating a mammal for a cardiovascular disorder comprising administering polypeptide, classified in class 514, subclass 2, for example.

18. Claims 41-42, drawn to method of treating a mammal for disturbance of consciousness comprising administering vector comprising nucleic acid, classified in class 514, subclass 44, for example.

19. Claims 43-44, drawn to method of treating a mammal for disturbance of consciousness comprising administering polypeptide, classified in class 514, subclass 2, for example.

20. Claims 45-46, drawn to method of treating a mammal for pain state comprising administering vector comprising nucleic acid, classified in class 514, subclass 44, for example.

21. Claims 41-42, drawn to method of treating a mammal for pain state comprising administering polypeptide, classified in class 514, subclass 2, for example.

The inventions are distinct, each from the other because of the following reasons:

The products of Inventions 1-13 are distinct from each other because they have distinct functional, chemical and physical properties capable of separate use and manufacture.

Art Unit: 1646

The products of Inventions 1-6 and the methods of Inventions 14, 17, 19 and 21 are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the proteins may be used for the production of antibodies of Invention 13.

The compounds of Invention 1-7 are distinct from the methods of Invention 15, 16, 18 and 20 wherein the compounds of Invention 1-7 can neither be used in nor made by the methods of Invention 15, 16, 18 and 20.

The compounds of Invention 7 are distinct from the methods of Invention 15, 16, 18 and 20 wherein the compounds of Invention 7 can neither be used in nor made by the methods of Invention 14, 17, 19 and 21.

The compounds Inventions 7-12 and the method of Invention 15, 16, 18, and 20 are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the nucleic acids of Invention 2 may be used to produce and isolate the encoded protein.

The methods of Inventions 14-21 are distinct from each other because they are independent, using separate method steps, active agents and having different effects.

Art Unit: 1646

Because these inventions are distinct for the reasons given above, restriction for examination purposes as indicated is proper. A search of the art for Inventions 1-21 would not be co-extensive with each other. Because the searches required for these inventions are not co-extensive an examination of the materially different, patentably distinct inventions in a single application would constitute a serious burden on the examiner.

The claims of group 15, 16, 18 and 20 are drawn to a multitude of nucleic acids, SEQ ID NO:1-5 and 12; claims 14, 17, 19 and 21 are drawn to a multitude of polypeptides encoded by nucleic acids, SEQ ID NO:1-5 and 12; claims 13 is drawn to a antibodies which specifically bind the polypeptides encoded by nucleic acids, SEQ ID NO:1-5 and 12. The claims apply to numerous protein and nucleic acids. This groups contain multiple, independent and distinct inventions. Even of the different nucleic acids/polypeptides/antibodies/and methods of use are independent and distinct because no common structural or functional properties are shared. Accordingly, these claims are subject to restriction under U.S.C. § 121. Upon election of Groups 1-21, Applicants is additionally required to elect a single nucleic acid, polypeptide, or antibody. This requirement is not to be constructed as a requirement for election of species, since each of the compounds recited in alternative form is not a member of a single genus of invention, but constitutes an independent and patentably distinct invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).



Art Unit: 1646

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(h).

**Advisory Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nirmal Basi whose telephone number is (703) 308-9435. The examiner can normally be reached on Monday-Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, can be reached on (703) 308-6564. The fax phone number for this Group is (703) 308-0294.

Official papers filed by fax should be directed to (703) 308-4242. Faxed draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Nirmal S. Basi

Art Unit 1646

December 16, 2001

  
YVONNE EYLER, PH.D  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600